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PLANTS OF THE EASTATOE

BY

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COLUMBIA, SOUTH CAROLINA
1978

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STATE DOCUMENTS

Location and Description of Area

From the Eastern Continental Divide at Eastatoe Gap, N. C., to Lake Keowee, Eastatoe Creek is the main artery of a drainage system that flows through an assortment of mountains, hills, and valleys. Sometimes cascading, sometimes sluggish, sometimes tortuous in its course, the stream flows at least thirteen miles and discharges about 87 cu. ft. of water per second into Lake Keowee. The descent is 1886 feet from its source at 2686 feet to its mouth at 800 ft. Except for a small section in Transylvania County, N. C., the area under consideration is in Pickens County in the northwest corner of South Carolina.

The Eastatoe is one of six major streams of the mammoth Keowee-Toxaway development, an electrical generating, lumbering, and recreational complex constructed by Duke Power Company. From east to west the streams are Eastatoe, Toxaway, Horsepasture, Thompson, Whitewater, and Little Eastatoe Creek and Little River flow into Lake Keowee whereas the others terminate in Lake Jocassee. All were tributaries of the Keowee River which is now almost completely covered by Lake Jocassee, Lake Keowee, and the Hartwell Reservoir.

All of the streams previously mentioned except Little River originate at high elevations in the Blue Ridge Mountains of North Carolina and flow down the escarpment to the Piedmont below. In places they have cut deep gorges as they plummet down the slopes. A great deal of floristic and ecological work has been done in these gorges where differences in elevation, exposure, and erosional features are reflected in the variety and relationships of life found there.

The upper Eastatoe flows southward and enters South Carolina about one mile below its source. It continues down the escarpment for another two miles. For this entire distance Highway 178 follows the Eastatoe Valley and crosses the stream about three-fourths of a mile above Rocky Bottom. From this point of crossing, the Eastatoe flows west of Rocky Bottom through very rugged country between Narrow Ridge and Twisting Pine Mountain for a distance of three miles. At the lower end of this segment of the Eastatoe the water surges through a steep-sided, trough-like passage known as the "Narrows." At this place an extremely rare filmy fern grows on some of the boulders.

Just below the "Narrows" the Eastatoe meanders for about four miles through level bottoms, covered with fields and pastures, which average about a third of a mile wide between the bordering mountains. Below the bottoms the Eastatoe again follows a rugged course between unnamed mountains until it reaches Lake Keowee. The stream is considerably shorter now that Lake Keowee backs water over the lower end of its original course.

Some of the larger tributaries of the Eastatoe are Wild Hog, Abner, Rocky Bottom, Side-of-mountain, Laurel, Reedy Cove, and Mill Creeks. Little Eastatoe Creek, a former tributary, has been cutoff from the Eastatoe by the new Lake Keowee.

All of the Eastatoe area has been extensively disturbed for a long period of time. Most of the land is too steep for farming and is in forests that have been exploited for years as indicated by crisscrossing logging roads and ragged scars resulting from the cutting of trees. Even in such virtually inaccessible places as along the lower part of Reedy Cove Creek, remnants of an old railroad still persist from the previous era when it was built specifically to remove timber.

Much of the forest land is now owned by Duke Power Company. About 375 acres of the gorge area, which is the least disturbed and most interesting part, was recently given by the company to the State of South Carolina to be preserved as a natural area. The tract of land is east of Narrow Ridge and extends from the vicinity of Rocky Bottom to below the "Narrows," a distance of nearly two miles.

Bottom lands are almost entirely in cultivation or pastures. Because the soil is fertile and rainfall abundant, they are very productive.

Besides being used for lumbering and farming, some locations are popular sites for summer homes and camps, especially at Rocky Bottom on Highway 178.

Except for alluvial soils in the bottoms, most soils can be classified as stony colluvium. Although we did not make a study of soils, they seem identical to those in nearby areas such as Horsepasture Gorge (Rodgers, 1965). Where soils are stable enough to develop profiles, topsoils are of various shades of brown and vary from about seven to fifteen inches deep. The subsoil is yellowish brown to reddish brown and is often twenty to thirty inches deep. Bedrock is exposed at the surface in many places.

The climate is mild in summer and moderate in winter. Records at nearby Brevard, N. C., show the mean annual precipitation is slightly above sixty inches with the heaviest amounts occurring in summer. Average snowfall is about ten inches. The average last killing frost date is April 29, and the first in the fall is October 13, leaving a growing season of about 167 days.

The Vegetation

Most of the woodland is a mixture of hardwoods consisting primarily of oaks. Scarlet, white, and red oaks are predominant in most places. Chestnut oak, though a common associate, is a smaller component of the forest. On drier sites post oak and blackjack oak are mixed with other oaks. Southern red oak (*Quercus falcata* Michx.) is also present at lower elevations. Associated with the oaks are several species of hickory, a few pines, sourwood, black gum, red maple, and an occasional magnolia (especially *Magnolia fraseri* Walt.). Dogwood is common in the understory while mountain laurel and blueberry (*Vaccinium vacillans* Torr.) are the most frequent shrubs.

On drier and poorer soils, often on the ridges and in abandoned fields, pines dominate. Most of the pines are Virginia and short-leaf, but pitch pine and table-mountain pine are sometimes mixed with them on the ridges. We did not find relatively pure stands of pitch pine or table-mountain pine as reported by Cooper (1963), Rodgers (1965), Mowbray (1966), and Racine (1966) in their studies of locations immediately to the west of this area. Most of the pine stands have been so extensively lumbered that their original composition cannot be determined. As in the adjacent Piedmont, Virginia pine predominates in the abandoned fields. White pine grows primarily along the streams.

In coves and beside streams where soil and moisture conditions are more favorable, the community of plants is altogether different. The most common trees are tulip poplar, basswood, sweet birch, hemlock, white pine, red maple, beech, ash, sweet gum, magnolia, buckeye, American holly, witch-hazel, alder, dogwood, and ironwood. This community is sometimes jungle-like with a thick undergrowth of mountain laurel, rhododendron, dog hobble, and grapes.

The Eastatoe is known as good fern country where three species of rare filmy ferns grow. One of them is not known elsewhere in North America. In addition, we found other fern records which are included in our total of 34 rare plants and 128 county records. Specimens of all plants, 670 in number, are deposited in the Ives Herbarium of Furman University.

Acknowledgements

Identifications of all the ferns have been authenticated by Dr. Herb Wagner. Financial support was given by Highlands Biological Station under NSF Grant GB-2496.

List of Vascular Plants

ACANTHACEAE

Ruellia caroliniensis (Walt.) Steud.

ACERACEAE

Acer negundo L.

Acer rubrum L.

Acer saccharum March. ssp. *Leucoderme* (Sm.) Desmarais

AIZOACEAE

Mollugo verticillata L.

ALISMATACEAE

Sagittaria latifolia Willd. var. *pubescens* (Muhl.) J. G. Sm.

ARMARANTHACEAE

Amaranthus hybridus L.

Amaranthus spinosus L.

AMARYLLIDACEAE

Hypoxis hirsuta (L.) Cov.

ANACARDIACEAE

Rhus copallina L.

Rhus glabra L.

Rhus radicans L.

Rhus toxicodendron L.

ANNONACEAE

Asimina parviflora (Michx.) Dunal

Asimina triloba (L.) Dunal

APIACEAE

Anglica venenosa (Greenway) Fern.

Chaerophyllum tainturieri Hook.

Cicuta maculata L.

Cryptotaenia canadensis (L.) DC.

Daucus carota L.

Eryngium yuccifolium Michx.

Hydrocotyle americana L.

Ligusticum canadense (L.) Britt.

Osmorhiza longistylis (Torr.) DC.

Oxypolis rigidior (L.) Raf.

Sanicula canadensis L.

Sanicula gregaria Bickn.
Sanicula smallii Bickn.
Thaspium trifoliatum (L.) Gray
Zizia trifoliata (Michx.) Fern.

APOCYNACEAE

Amsonia tabernaemontana Walt.
Apocynum cannabinum L.

AQUIFOLIACEAE

Ilex ambigua (Michx.) Torr. var *montana* (T. & G.) Ahles
Ilex opaca Ait.

ARACEAE

Arisaema triphyllum (L.) Schott.

ARALIACEAE

Aralia racemosa L.
Aralia spinosa L.
Panax quinquefolium L.

ARISTOLOCHIACEAE

Aristolochia macrophylla L.
Hexastylis arifolia (Michx.) Small
Hexastylis minor (Ashe) Blomquist
Hexastylis shuttleworthii (Britt. & Baker) Small

ASCLEPIADACEAE

Asclepias amplexicaulis Am.
Asclepias exaltata L.
Asclepias tuberosa L.
Asclepias variegata L.
Matelea carolinensis (Jacq.) Woodson
Matelea gonocarpa (Walt.) Shinnars

ASPIDIACEAE

Athyrium asplenoides (Michx.) A. A. Eat.
Cystopteris protusa (Weath.) Blasdell
Dryopteris intermedia (Willd.) Gray
Dryopteris marginalis (L.) Gray
Onoclea sensibilis L.
Polystichum acrostichoides (Michx.) Schott
Thelypteris hexagonoptera (Michx.) Weath.
Thelypteris noveboracensis (L.) Nieuwl.

ASPLENIACEAE

- Asplenium montanum* Willd.
- Asplenium platyneuron* (L.) Oakes
- Asplenium trichomanes* L.

ASTERACEAE

- Achillea millefolium* L.
- Ambrosia artemisiifolia* L.
- Ambrosia trifida* L.
- Antennaria plantaginifolia* (L.) Richards. var. *plantaginifolia*
- Antennaria solitaria* Rydb.
- Anthemis arvensis* L.
- Artemisia vulgaris* L.
- Aster curtisii* T. & G.
- Aster divaricatus* L.
- Aster infirmus* Michx.
- Aster linariifolius* L.
- Aster paternus* Cronquist
- Aster pilosus* Willd.
- Aster solidagineus* Michx.
- Aster surculosus* Michx.
- Bidens bipinnata* L.
- Bidens frondosa* L.
- Cacalia atriplicifolia* L.
- Carduus altissimus* L.
- Carduus lanceolatus* L.
- Carduus muticus* (Michx.) Pers.
- Chrysanthemum leucanthemum* L.
- Chrysogonum virginianum* L. var. *australe* (Alex.) Ahles
- Coreopsis auriculata* L.
- Coreopsis major* Walt. var. *stellata* (Nutt.) Robins
- Elephantopus carolinianus* Willd.
- Elephantopus tomentosus* L.
- Erechtites hieracifolia* (L.) Raf.
- Erigeron annuus* (L.) Pers.
- Erigeron canadensis* L.
- Erigeron pulchellus* Michx.
- Erigeron strigosus* Muhl.
- Eupatorium aromaticum* L.
- Eupatorium capillifolium* (Lam.) Small
- Eupatorium fistulosum* Barratt
- Eupatorium hyssopifolium* L.
- Eupatorium perfoliatum* L.
- Eupatorium purpureum* L.
- Eupatorium resinosum* Torr.
- Eupatorium rotundifolium* L.
- Eupatorium rugosum* Houtt.

Galinsoga ciliata (Raf.) Blake
Gnaphalium obtusifolium L.
Gnaphalium purpureum L.
Haplopappus divaricatus (Nutt.) Gray
Helenium amarum (Raf.) H. Rock
Helianthus atrorubens L.
Helianthus divaricatus L.
Helianthus hirsutus Raf.
Helianthus maximiliani Schroder
Helianthus microcephalus T. & G.
Helianthus strumosus L.
Heterotheca graminifolia (Michx.) Shinnery
Heterotheca mariana (L.) Shinnery
Hieracium florentinum Ait.
Hieracium gronovii L.
Hieracium paniculatum L.
Hieracium venosum L.
Hypochoeris radicata L.
Krigia virginica (L.) Willd.
Kuhnia eupatorioides L.
Lactuca canadensis L.
Liatris earlei (Green) K. Schum.
Liatris spicata (L.) Willd.
Parthenium integrifolium L.
Polymnia uvedalia L.
Prenanthes serpentaria Pursh
Prenanthes trifoliata (Cass.) Fern.
Pyrrhopappus carolinianus (Walt.) DC.
Rudbeckia hirta L.
Rudbeckia laciniata L.
Senecio aureus L.
Senecio smallii Britt.
Silphium compositum Michx.
Solidago caesia L.
Solidago curtisii T. & G.
Solidago erecta Pursh
Solidago gigantea Ait.
Solidago nemoralis Ait.
Solidago odora Ait.
Solidago speciosa Nutt.
Solidago uliginosa Nutt.
Sonchus asper (L.) Hill
Taraxacum officinale Wiggers
Verbesina alternifolia (L.) Britt. ex Kearney
Verbesina occidentalis (L.) Walt.
Verbesina virginica L.
Vernonia noveboracensis (L.) Michx.
Xanthium strumarium (L.) var. *glabratum* (DC.) Conquist

BALSAMINACEAE

Impatiens capensis Meerb.

BERBERIDACEAE

Berberis thunbergii DC.

Berberis vulgaris L.

Caulophyllum thalictroides (L.) Michx.

Podophyllum peltatum L.

BETULACEAE

Alnus serrulata (Ait.) Willd.

Betula lenta L.

Carpinus caroliniana Walt.

Corylus americana Walt.

BIGNONIACEAE

Anisostichus capreolata (L.) Bureau

Campsis radicans (L.) Seem.

Catalpa speciosa Warder ex Engelm.

BRASSICACEAE

Arabidopsis thaliana (L.) Heynh.

Barbarea verna (Mill.) Aschers.

Brassica napus L.

Cardamine concatenata (Michx.) Ahles

Cardamine diphylla (Michx.) Wood.

Cardamine hirsuta L.

Lepidium virginicum L.

Sibaria virginica (L.) Rollins

BUXACEAE

Pachysandra procumbens Michx.

CALYCANTHACEAE

Calycanthus floridus L. var. *laevigatus* (Willd.) T. & G.

CAMPANULACEAE

Campanula divaricata Michx.

Lobelia cardinalis L.

Lobelia inflata L.

Lobelia puberula Michx.

Specularia perfoliata (L.) A. DC.

CAPRIFOLIACEAE

Lonicera fragrantissima Lindl & Pax

Lonicera japonica Thunb.

Sambucus canadensis L.

Symphoricarpos orbiculatus Moench.
Viburnum acerifolium L.
Viburnum cassinoides L.
Viburnum rufidulum Raf.

CARYOPHYLLACEAE

Cerastium glomeratum Thuill.
Cerastium viscosum L.
Dianthus armeria L.
Paronchia canadensis (L.) Wood
Sagina decumbens (Ell.) T. & G.
Saponaria officinalis L.
Silene antirrhina L.
Silene virginica L.
Stellaria graminea L.
Stellaria media (L.) Cyrillo
Stellaria pubera Michx.

CELASTRACEAE

Euonymus americanus L.

CHENOPODIACEAE

Chenopodium album L.
Chenopodium ambrosioides L.

CLETHRACEAE

Clethra acuminata Michx.

COMMELINACEAE

Aneilema keisak Hasskarl
Commelina communis L.
Tradescantia subaspera Ker.

CONVOLVULACEAE

Calystegia sepium (L.) R. Brown
Calystegia sericata (House) Bell
Cuscuta campestris Yuncker
Cuscuta compacta Juss.
Cuscuta gronovii Willd. ex R. & S.
Ipomoea coccinea L.
Ipomoea hederacea (L.) Jacq.
Ipomoea lacunosa L.
Ipomoea pandurata (L.) G. F. W. Mey.
Ipomoea purpurea (L.) Roth

CORNACEAE

Cornus alternifolia L. F.

Cornus amomum Mill.

Cornus florida L.

CRASSULACEAE

Sedum telephoides Michx.

CUPRESSACEAE

Juniperus virginiana L.

CYPERACEAE

Bulbostylis capillaris (L.) Clarke

Carex lurida Whalenb.

Carex pensylvanica Lam.

Carex rosea Schkuhr

Cyperus compressus L.

Cyperus erythrorhizos Muhl.

Cyperus globulosus Aubl.

Cyperus lancastricensis Porter

Cyperus ovularis (Michx.) Torr.

Cyperus refractus Engelm. ex. Boeckl.

Cyperus strigosus L.

Cyperus tenuifolius (Steud.) Dandy

Eleocharis obtusa (Willd.) Schult.

Fimbristylis autumnalis (L.) R. & S.

Rhynchospora capitellata (Michx.) Vahl

Scirpus cyperinus (L.) Kunth.

Scirpus polyphyllus Vahl

Scirpus purshianus Fern.

DIAPENSIACEAE

Galax aphylla L.

DIOSCOREACEAE

Dioscorea batatas Done.

Dioscorea villosa L.

ERICACEAE

Chimaphila maculata (L.) Pursh

Epigaea repens L.

Gaultheria procumbens L.

Gaylussacia dumosa (Andrx.) T. & G.

Gaylussacia frondosa (L.) T. & G.

Gaylussacia ursina (Curtis) T. & G.

Kalmia latifolia L.

Leucothoe axillaris (Lam.) D. Don. var. *editorum* (Fern. & Schub.)

Ahles

Leucothoe recurva (Buckl.) Gray
Lyonia ligustrina (L.) DC.
Monotropa hypopithys L.
Monotropa uniflora L.
Oxydendrum arboreum (L.) DC.
Rhododendron calendulaceum (Michx.) Torr.
Rhododendron maximum L.
Rhododendron minus Michx.
Rhododendron nudiflorum (L.) Torr.
Rhododendron viscosum (L.) Torr.
Vaccinium arboreum Marsh.
Vaccinium atrococcum (Gray) Porter
Vaccinium stamineum L.
Vaccinium vacillans Torr.

EUPHORBIACEAE

Acalypha gracilens L.
Acalypha rhomboidea Raf.
Croton glandulosus L.
Euphorbia corollata L.
Euphorbia maculata L.
Phyllanthus carolinensis Walt.
Tragia urticifolia Michx.

FABACEAE

Albizzia julibrissin Durazzini
Amorpha fruticosa L.
Amorpha glabra Poir.
Amphicarpa bracteata (L.) Fern.
Apios americana Medic.
Baptisia alba (L.) R. Br.
Baptisia tinctoria (L.) R. Br.
Cassia fasciculata Michx.
Cassia nictitans L.
Cassia obtusifolia L.
Cercis canadensis L.
Clitoria mariana L.
Crotalaria purshii DC.
Desmodium glutinosum (Muhl. ex Willd.) Wood
Desmodium laevigatum (Nutt.) DC.
Desmodium marilandicum (L.) DC.
Desmodium nudiflorum (L.) DC.
Desmodium paniculatum (L.) DC.
Desmodium perplexum Schub.
Desmodium rotundifolium DC.
Desmodium strictum (Pursh) DC.
Desmodium viridiflorum (L.) DC.
Galactia volubilis (L.) Britt.

Gleditsia triacanthos L.
Lathyrus latifolius L.
Lespedeza cuneata (Dumont) G. Don
Lespedeza hirta (L.) Hornem.
Lespedeza intermedia (S. Wats.) Britt.
Lespedeza procumbens Michx.
Lespedeza repens (L.) Bart.
Lespedeza striata (Thunb.) H. & A.
Phaseolus sinuatus Nutt. ex T. & G.
Pueraria lobata (Willd.) Ohwi
Rhynchosia tomentosa (L.) H. & A.
Robinia hispida L.
Robinia pseudo-acacia L.
Schrankia microphylla (Soland ex Sm.) Macbr.
Strophostyles helvolva (L.) Ell
Stylosanthes biflora (L.) BSP.
Tephrosia spicata (Walt.) T. & G.
Tephrosia virginiana (L.) Pers.
Thermopsis fraxinifolia (Nutt.) M. A. Curtis
Thermopsis mollis (Minchx.) M. A. Curtis ex Gray
Trifolium campestre Schreb.
Trifolium hybridum L.
Trifolium pratense L.
Trifolium repens L.
Vicia angustifolia Reich.
Vicia caroliniana Walt.
Vicia dasycarpa Ten.
Wisteria sinensis (Sims) Sweet

FAGACEAE

Castanea dentata (Marsh.) Borkh.
Castanea pumila (L.) Mill.
Fagus grandifolia Ehrh.
Quercus alba L.
Quercus coccinea Muenchh.
Quercus falcata Michx.
Quercus marilandica Muenchh.
Quercus nigra L.
Quercus prinus L.
Quercus rubra L.
Quercus stellata Wong.
Quercus velutina Lam.

GENTIANACEAE

Gentiana saponaria L.
Gentiana villosa L.
Obolaria virginica L.
Sabatia angularis (L.) Pursh

GERANIACEAE

- Geranium carolinianum* L.
- Geranium maculatum* L.

HAMAMELIDACEAE

- Hamamelis virginiana* L.
- Liquidambar styraciflua* L.

HIPPOCASTANACEAE

- Aesculus octandra* Marsh.
- Aesculus sylvatica* Bart.

HYMENOPHYLLACEAE

- Hymenophyllum tunbridgense* (L.) Smith
- Trichomanes boschianum* Sturm ex Bosch
- Trichomanes petersii* Gray

HYPERICACEAE

- Hypericum gentianoides* (L.) BSP.
- Hypericum hypericoides* (L.) Crantz
- Hypericum mutilum* L.
- Hypericum punctatum* La.

IRIDACEAE

- Belamcanda chinensis* (L.) DC.
- Iris ambigua* (Michx.) Torr. var. *montana* (T. & G.) Ahles
- Iris cristata* Ait.
- Iris verna* L. var. *smalliana* Fern.
- Sisyrinchium arenicola* Bickn.
- Sisyrinchium mucronatum* Michx. var. *atlanticum* (Bickn.) Ahles

JUGLANDACEAE

- Carya aquatica* (Michx. f.) Nutt.
- Carya cordiformis* (Wang.) K. Koch
- Carya glabra* (Mill.) Sweet
- Carya ovalis* (Wang.) Sarg.
- Carya pallida* (Ashe) Engler & Graebn.
- Carya tomentosa* (Poir.) Nutt.
- Juglans cinerea* L.
- Juglans nigra* L.

JUNCACEAE

- Juncus coriaceus* Mackenz.
- Juncus debilis* Gray
- Juncus diffusissimus* Buckl.

Juncus marginatus Rostk.
Juncus tenuis Willd.
Luzula acuminata Raf. var. *carolinae* (Wats.) Fern.
Luzula echinata (Small) Herm.

LAMIACEAE

Collinsonia canadensis L.
Collinsonia verticillata Baldw. ex. Ell.
Dracocephalum virginiana L.
Glechoma hederacea L.
Lamium amplexicaule L.
Lycopus uniflorus Michx.
Lycopus virginicus L.
Monarda clinopodia L.
Nepeta cataria L.
Prunella vulgaris L.
Pycnanthemum incanum (L.) Michx.
Pycnanthemum montanum Michx.
Salvia lyrata L.
Salvia urticifolia L.
Scutellaria elliptica Muhl.
Stachys hyssopifolia Michx.
Stachys latidens Small

LAURACEAE

Lindera benzoin (L.) Blume
Sassafras albidum (Nutt.) Nees

LILIACEAE

Aletris farinosa L.
Allium cernuum Roth. ex Roem.
Allium vineale L.
Chamaelirium luteum (L.) Gray
Clintonia umbellulata (Michx.) Morong
Disporum languinosum (Michx.) Nicholson
Erythronium americanum Ker.
Hemerocallis fulva L.
Lilium michauxii Poir.
Medeola virginiana L.
Melanthium hybridum Walt.
Polygonatum biflorum (Walt.) Ell.
Smilacina racemosa (L.) Desf.
Smilax bona-nox L.
Smilax ecirrhata (Engelm.) S. Wats.
Smilax glauca Walt.
Smilax herbacea L. var. *pulverulenta* (Michx.) Gray
Smilax rotundifolia L.
Trillium catesbaei Ell.

Trillium discolor Wray
Trillium erectum L.
Uvularia perfoliata L.
Uvularia pudica (Walt.) Fern.
Uvularia sessilifolia L.
Veratrum parviflorum Michx.
Xerophyllum asphodeloides (L.) Nutt.
Yucca filamentosa L.

LINACEAE

Linum striatum Walt.
Linum virginianum L. var. *virginianum*

LOGANIACEAE

Buddleja lindleyana Fortune
Polypremum procumbens L.
Spigelia marilandica L.

LORANTHACEAE

Phoradendron flavescens (Pursh) Nutt.

LYCOPODIACEAE

Lycopodium flabelliforme (Fern.) Blanch.
Lycopodium lucidulum Michx.

MAGNOLIACEAE

Liriodendron tulipifera L.
Magnolia acuminata L.
Magnolia fraseri Walt.

MALVACEAE

Abutilon theophrastii Medic.
Althaea rosea Cav.
Hibiscus syriacus L.
Sida spinosa L.

MELASTOMATACEAE

Rhexia virginica L.

MELIACEAE

Melia azedarach L.

MENISPERMACEAE

Cocculus carolinus (L.) DC.

MORACEAE

Morus rubra L.

NYSSACEAE

Nyssa sylvatica Marsh.

OLEACEAE

Frazinus americana L. var. *americana*

Fraxinus americana L. var. *biltmoreana* (Beadle) J. Wright ex Fern.

Ligustrum sinense Lour.

ONAGRACEAE

Circaea lutetiana Gray, et al. ssp. *Canadensis* (L.) Aschers. & Magnus

Epilobium coloratum Biehler

Ludwigia alternifolia L.

Ludwigia palustris (L.) Ell.

Oenothera biennis L.

Oenothera fruticosa L.

Oenothera laciniata Hill

Oenothera perennis L.

Oenothera tetragona Roth

OPHIOGLOSSACEAE

Botrychium alabamense Maxon

Botrychium dissectum Spreng.

Botrychium virginianum (L.) Sw.

ORBANCHACEAE

Conopholis americana (L.) Wallr.

Epifagus virginiana (L.) Bart.

ORCHIDACEAE

Cleistes divaricata (L.) Ames

Corallorhiza odontorhiza (Willd.) Nutt.

Cypripedium acaule Ait.

Cypripedium calceolus L. var. *pubescens* (Willd.) Correll

Goodyera pubescens (Willd.) R. Br.

Habenaria ciliaris (L.) R. Br.

Habenaria clavellata (Michx.) Spreng.

Habenaria lacera (Michx.) Lodd.

Hexalectris spicata (Walt.) Barnh.

Malaxis unifolia Michx.

Orchis spectabilis L.

Spiranthes cernua (L.) Richard

Spiranthes gracilis (Bigel.) Beck

Tipularia discolor (Pursh) Nutt.

Triphora trianthophora (Sw.) Rydb.

OSMUNDACEAE

Osmunda cinnamomea L.

Osmunda regalis L. var. *spectabilis* (Willd.) Gray

OXALIDACEAE

Oxalis dillenii Jacq.

Oxalis stricta L.

Oxalis violacea L.

PAPAVERACEAE

Macleaya cordata (Willd.) R. Br.

Sanguinaria canadensis L.

PASSIFLORACEAE

Passiflora incarnata L.

Passiflora lutea L.

PHRYMACEAE

Phryma leptostachya L.

PHYTOLACCACEAE

Phytolacca americana L.

PINACEAE

Pinus echinata Mill.

Pinus pungens Lamb.

Pinus rigida Mill.

Pinus strobus L.

Pinus taeda L.

Pinus virginiana Mill.

Tsuga canadensis (L.) Carr.

PLANTAGINACEAE

Plantago aristata Michx.

Plantago lanceolata L.

Plantago rugelii Dcne.

Plantago virginica L.

PLATANACEAE

Platanus occidentalis L.

POACEAE

Agrostis perennans (Walt.) Tuckerm.

Agrostis stolonifera L.

Andropogon scoparius Michx.

Anthoxanthus odoratum L.

Aristida longispica Poir.

Arundinaria gigantea (Walt.) Muhl.

Cynodon dactylon (L.) Pers.

Dactylis glomerata L.

Digitaria ischaemum (Schreb.) Schreb.
Digitaria sanguinalis (L.) Scopoli
Eleusine indica (L.) Gaertn.
Erianthus contortus Baldw. ex Ell.
Holcus lanatus L.
Miscanthus sinensis Anderss. var. *zebrinus* Beal
Panicum anceps Michx.
Panicum boscii Poir.
Panicum dichotomum L.
Panicum lanuginosum Ell.
Panicum laxiflorum Lam.
Panicum polyanthes Schultes
Paspalum boscianum Flugge
Phleum pratense L.
Setaria geniculata (Lam.) Beauv.
Setaria glauca (L.) Beauv.
Stipa avenacea L.
Tripsacum dactyloides L.
Uniola laxa (L.) BSP
Uniola sessiliflora Poir.

PODOSTEMACEAE

Podostemum ceratophyllum Michx.

POLEMONIACEAE

Phlox amoena Sims
Phlox glaberrima L.
Phlox paniculata L.
Phlox stolonifera Sims

POLYGALACEAE

Polygala polygama Walt.

POLYGONACEAE

Polygonum cespitosum Blume var. *longisetum* (DeBruyn.) Stewart
Polygonum convolvulus L.
Polygonum punctatum Ell.
Polygonum sagittatum L.
Polygonum scandens L.
Rumex acetosella L.
Rumex crispus L.
Rumex obtusifolius L.
Tovaria virginiana (L.) Raf.

POLYPODIACEAE

Polypodium polypodioides (L.) Watt
Polypodium virginianum L.

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PRIMULACEAE

Lysimachia lanceolata Walt.

Lysimachia quadrifolia L.

PTERIDACEAE

Adiantum pedatum L.

Cheilanthes tomentosa Link

Dennstaedtia punctilobula (Michx.) Moore

Pteridium aquilinum (L.) Kuhn.

RANUNCULACEAE

Actaea pachypoda Ell.

Anemone quinquefolia L.

Anemone virginiana L.

Cimicifuga racemosa Nutt.

Clematis virginiana L.

Hepatica acutiloba DC.

Ranunculus abortivus L.

Ranunculus acris L.

Ranunculus hispidus Michx.

Thalictrum clavatum DC.

Thalictrum thalictroides (L.) Boivin

Xanthorhiza simplicissima Marsh.

RHAMNACEAE

Ceanothus americanus L.

ROSACEAE

Agrimonia gryposepala Wallr.

Agrimonia parviflora Ait.

Amelanchier arborea (Michx. F.) Fern. var. *arborea*

Aruncus dioicus (Walt.) Fern

Crataegus uniflora Muenchh.

Duchesnea indica (Andrz.) Focke

Fragaria virginiana Dcne.

Geum canadense Jacq.

Geum laciniatum Murray

Gillenia trifoliata (L.) Moench

Malus angustifolia (Ait.) Michx.

Malus pumila Mill.

Potentilla canadensis L.

Potentilla norvegica L.

Potentilla simplex Michx.

Prunus angustifolia Marsh.

Prunus cerasus L.

Prunus persica (L.) Batsch

Prunus serotina Ehrh

Pyracantha crenato-serrata Rehd.
Rosa carolina L.
Rosa multiflora Thunb.
Rubus allegheniensis Porter
Rubus flagellaris Willd.
Rubus occidentalis L.
Rubus phoenicolasius Maxim.

RUBIACEAE

Diodia teres Walt.
Diodia virginiana L.
Galium circaezans Michx.
Galium latifolium Michx.
Galium pilosum Ait.
Galium triflorum Michx.
Houstonia caerulea L.
Houstonia purpurea L.
Houstonia serpyllifolia Michx.
Mitchella repens L.

SALICACEAE

Populus candicans Ait.
Salix babylonica L.
Salix nigra Marsh.
Salix sericea Marsh.

SANTALACEAE

Pyrularia pubera Michx.

SAXIFRAGACEAE

Decumaria barbara L.
Heuchera parviflora Bartl.
Heuchera villosa Michx.
Hydrangea arborescens L. ssp. *radiata* (Walt.) McClintock
Hydrangea macrophylla Ser.
Itea virginica L.
Philadelphus hirsutus Nutt.
Philadelphus inodorus L.
Saxifraga micranthidifolia (Haw.) Britt.
Tiarella cordifolia L.

SCROPHULARIACEAE

Agalinus tenuifolia (Vahl) Raf.
Aureolaria flava (L.) Farw.
Aureolaria laevigata (Raf.) Raf.
Aureolaria pedicularia (L.) Raf.
Aureolaria virginica (L.) BSP.

Chelone glabra L.
Linaria canadensis (L.) Dumont
Lindernia dubia (L.) Pennell
Mimulus ringens L.
Paulownia tomentosa (Thunb.) Steud.
Pedicularis canadensis L.
Penstemon laevigatus Soland. ex Ait.
Verbascum blattaria L.
Verbascum thapsus L.

SELAGINELLACEAE

Selaginella apoda (L.) Spring

SOLANACEAE

Datura stramonium L.
Physalis pubescens L.
Physalis virginiana Mill.
Solanum americanum Mill.
Solanum carolinense L.

STYRACACEAE

Halesia carolina L.
Styrax grandifolia Ait.

SYMPLOCACEAE

Symplocos tinctoria (L.) L'Her.

TILIACEAE

Tilia heterophylla Vent.

TYPHACEAE

Typha latifolia L.

ULMACEAE

Celtis laevigata Willd.
Celtis occidentalis L. Var. *georgiana* (Small) Ahles
Ulmus alata Michx.
Ulmus rubra Muhl.

URTICACEAE

Boehmeria cylindrica (L.) Sw.
Laportea canadensis (L.) Gaud.
Pilea pumila (L.) Gray

VALERIANACEAE

Valerianella radiata (L.) Dufr.

VERBENACEAE

Callicarpa americana L.

Verbena urticifolia L.

VIOLACEAE

Hybanthus concolor (T. F. Forst.) Spreng.

Viola blanda Willd.

Viola canadensis L.

Viola emarginata (Nutt.) LeConte

Viola eriocarpa Schwein. var. *leiocarpa* Fern. & Wieg.

Viola hastata Michx.

Viola palmata L. var. *triloba* (Schwein.) Ging. ex DC.

Viola papilionacea Pursh

Viola pedata L.

Viola primulifolia L.

Viola rafinesquii Greene

Viola rostrata Pursh

Viola rotundifolia Michx.

Viola striata Ait.

Viola tripartita Ell.

Viola walteri House

VITACEAE

Parthenocissus quinquefolia (L.) Planch.

Vitis aestivalis Michx.

Vitis baileyana Munson

Vitis labrusca L.

Vitis rotundifolia Michx.

Vitis vulpina L.

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